



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,040	06/23/2003	Trevor Merry	13587.37	9519

22913 7590 09/18/2007
WORKMAN NYDEGGER
60 EAST SOUTH TEMPLE
1000 EAGLE GATE TOWER
SALT LAKE CITY, UT 84111

EXAMINER

LIEW, ALEX KOK SOON

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

09/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/602,040	Applicant(s) MERRY ET AL.	
	Examiner Alex Liew	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2624

The amendment filed on July 17, 2007 is entered and made of record.

Response to Applicant's Arguments

On page 12, the applicant stated:

Consequently, Bersen et al. could not possibly allow for, or contemplate, any direct visual comparison of markings as per applicant's invention. Nor does Bersen et al. in any manner contemplate or speak to applicant's applied feature which is, by its form, inherently unnoticeable to an observer (unobtrusive to the human eye). Similarly, the cited reference to Eshera et al. does not allow for, or contemplate any such direct visual comparison of markings but instead describes and teaches a computerized comparison of digitized fingerprint minutia maps (ARGs) of fingerprints of an unknown fingerprint set with corresponding (digitized) maps of reference fingerprint maps (see column 2, lines 65-66, column 6, lines 1-40 and Figs. 1a, 1b and 3a). No markings are applied to a document and the focus of Eshera et al. is computerized processing, being digital and necessarily performed by a machine, not visual per the applicant's invention and performable by persons.

The examiner disagrees. The examiner will clarify using the amended claim 38.

Eshera (US pat no 5,613,014) discloses a method of verifying a person, the method including optically detecting a first graphical constellation of marks applied to a predefined area of said article, said first graphical constellation of marks corresponding to a set of points of interest defining characteristics useful for identifying a specific person and being determinable from said first graphical constellation of marks (see figure 2, element 12 is the optical scanner; the set of points are those call minutia points, an example shown in figure 3a and figure 5), acquiring a biometric sample of said characteristics from said person to be verified and representing said characteristics from said person to be verified by a second graphical constellation of marks (see figure 2, element 22 stores reference minutia points), comparing said first graphical

Art Unit: 2624

constellation of marks and / or said set of points of interest with said second graphical constellation of marks to determine a likelihood of a match between said characteristics useful to identify said specific person and said characteristics from said person to be verified (see figure 2, elements 26, 28 and 30 are matching modules which match the current set of minutia points with reference minutia points) and selecting the highest stored score, associating with said person to be verified (see figure 2, element 36).

Eshera does not use verifying person using scores which exceeds a threshold, however it is well known in the art of biometric / personal identification to using a threshold value against scoring to identify a person. One skilled in the art would include identifying a person by comparing score to a threshold value because to determine similarity between the current minutia points with reference minutia points, to increase accuracy of the recognition process.

Eshera does not disclose associating an article to biometric information of a specific person. Berson discloses associating an article to biometric information of a specific person (see figure 5, element I is the card where information such as facial image are being stored). One skilled in the art would include associating an article to biometric information of a specific person because to prevent the card from being used by another individual other than the owner of the card, to increase security.

The combination of Eshera and Berson disclose the claimed invention of claim 38.

The examiner will revise the rejection made in the previous office action.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 4, 7 – 11, 15 – 19, 24 – 26, 28, 30 – 33, 35 – 38 and 41 – 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eshera ('014) in view of official notice (MPEP 2144.03) and Berson (US pat no 5,469,506).

With regards to claim 38, Eshera discloses a method of verifying a person, the method including optically detecting a first graphical constellation of marks applied to a predefined area of said article, said first graphical constellation of marks corresponding to a set of points of interest defining characteristics useful for identifying a specific person and being determinable from said first graphical constellation of marks (see figure 2, element 12 is the optical scanner; the set of points are those call minutia points, an example shown in figure 3a and figure 5), acquiring a biometric sample of said characteristics from said person to be verified and representing said characteristics from said person to be verified by a second graphical constellation of marks (see figure 2, element 22 stores reference minutia points), comparing said first graphical constellation of marks and / or said set of points of interest with said second graphical constellation of marks to determine a likelihood of a match between said characteristics

Art Unit: 2624

useful to identify said specific person and said characteristics from said person to be verified (see figure 2, elements 26, 28 and 30 are matching modules which match the current set of minutia points with reference minutia points) and selecting the highest stored score, associating with said person to be verified (see figure 2, element 36).

Eshera does not use verifying person using scores which exceeds a threshold, however it is well known in the art of biometric / personal identification to using a threshold value against scoring to identify a person. One skilled in the art would include identifying a person by comparing score to a threshold value because to determine similarity between the current minutia points with reference minutia points, to increase accuracy of the recognition process.

Eshera does not disclose associating an article to biometric information of a specific person. Berson discloses associating an article to biometric information of a specific person (see figure 5, element I is the card where information such as facial image are being stored). One skilled in the art would include associating an article to biometric information of a specific person because to prevent the card from being used by another individual other than the owner of the card, to increase security.

The combination of Eshera and Berson disclose the claimed invention of claim 38.

With regards to claim 41, Eshera reads on applying a visual transformation process to said first graphical constellation of marks to determine said set of points of interest (see figure 5, the transformation is the rotation of the vertical and horizontal axis).

Art Unit: 2624

With regards to claim 42, Eshera discloses the first graphical constellation of marks is one and the same as said set of points of interest, each said mark's positioning having been derived from physical characteristics of a specific person such that said first graphical constellation of marks is unique to said specific person (see figure 5, each individual inherently has a unique pattern of minutia points).

With regards to claim 43, Eshera discloses a method of claim 38, wherein said characteristics are unique to and taken from a finger of a person (see figure 5).

With regards to claim 44, Eshera discloses a method of claim 43, wherein step includes directly acquiring said biometric sample from said person to be verified by way of a biometric system (see figure 2, element 40).

With regards to claim 45, Eshera discloses said characteristic are unique to and taken from a finger of a person (see figure 5).

With regards to claim 46, see the rationale and rejection for claim 38.

With regards to claim 1, see the rationale and rejection for claim 38.

With regards to claim 2, see the rationale and rejection for claim 42.

With regards to claim 3, Eshera and Berson disclose all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose group of marks are derived from characteristic of an eye of said person.

Berson suggests biometric information can be derived from the characteristic of an eye of said person (see col. 4 lines 35 – 37) onto the sub-fields of the card (see fig 1, element 18). For example, the minutia points can be place on the center of the iris and a few minutia points on the perimeter of the eye, to form a star type minutia formation group for distance calculation between each minutia points as disclosed in Eshera (see fig 4a and col. 9 lines 10 to 16, when each star is form the system calculates the distance between the center node to each of the neighboring node, clearly, since an eye on face has a plurality of feature landmarks, see MPEP 2144.03, official notice, these type of biometrics would have been alternatives to the fingerprint of Eshera because they would function the same and produce the same type of results); these distance information can be use to compare to a database of set database for individual identification. As discussed in claim 38, one would use graphical constellation because it allows the database to only need to save the values of the distance between neighboring minutia to avoid saving the entire biometric as a template (which takes up more storage space) to save storage space in the computer database.

With regards to claim 4, Berson discloses all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails

Art Unit: 2624

to disclose group of marks are derived from characteristic of an face of said person.

Berson suggests biometric information can be derived from the characteristic of a face of said person (see col. 4 lines 35 to 37) onto the sub-fields of the card (see fig 1, element 18). For example, the center minutia point can be place on the nose and a few minutia points place on the eye, cheek, mouth and ears onto the image of the individual's face, to form a star type minutia formation for distance calculation between each minutia points as disclosed in Eshera (see discussion from claim 3). As discussed in claim 38, one would use graphical constellation because it allows the database to only need to save the values of the distance between neighboring minutia to avoid saving the entire biometric as a template (which takes up more storage space) to save storage space in the computer database.

With regards to claim 7, see the rationale and rejection for claim 4.

With regards to claim 8, Eshera discloses spatial arrangement of said group of marks comprises at least two sub-groups of marks, each sub-group of marks being derived from distinct group of characteristics of said person (see figure 3a, each star four or five nodes connected together, read as a sub-group of marks).

With regards to claim 9, Eshera discloses at least two sub-groups of marks is derived from characteristics of a fingerprint of said specific person said characteristics comprising physical dimensions (see figure 3b, has four stars).

Art Unit: 2624

With regards to claim 10, Eshera discloses at least two sub-groups of marks is derived from characteristics of an eye of said specific person said characteristics comprising physical dimensions (see figure 3b, the 'local ridge width' is a physical dimension).

With regards to claim 11, see the rationale and rejection for claim 10.

With regards to claim 15, Eshera discloses different sub-groups of marks comprise differently sized indicia (see figure 3a, each star has a different size).

With regards to claim 16, Eshera discloses having different sub-groups of marks comprise differently shape indicia (see figure 3a, each star has a different shape).

With regards to claims 17 – 19, see the rationale and rejection for claim 38 (figure 2 of Eshera).

With regards to claims 24 to 26, see the rationale and rejection for claim 38.

With regards to claim 28, see the rationale and rejection for claim 4.

With regards to claim 30, see the rationale and rejection for claim 4.

Art Unit: 2624

With regards to claim 31, see the rationale and rejection for claim 8.

With regards to claim 32, see the rationale and rejection for claim 11.

With regards to claim 33, see the rationale and rejection for claim 8.

With regards to claim 35, Eshera discloses said set points of interest and said constellation of marks are one and the same, said direct optical comparison being between said marks and said selected reference (see figure 2, element 26, 28 and 30).

With regards to claim 36, Eshera discloses said set of points of interest is determined from said constellation of marks according to a predetermined mathematical formula (see figure 3c, calculating the Euclidean distance requires at least one mathematical formula).

With regards to claim 37, see the rationale and rejection for claim 41.

3. Claims 5, 6, 12 – 14, 21 – 23, 27, 29, 34, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eshera ('014) in view of official notice and Berson ('506) as applied to claim 38 further in view of Greenaway (US pat no 3,643,216).

With regards to claim 39, Eshera and Berson disclose all the limitations in claim 38, but do not disclose illuminating said predefined area with light having a predefined wavelength require to render visible said first graphical constellation of marks.

Greenaway discloses illuminating said predefined area with light having a predefined wavelength require to render visible said first graphical constellation of marks (see column 4, lines 48 to 66; see figure 3, the graphical representation is extracted using the light source onto the photomatrix). One skilled in the art would include illuminating said predefined area with light having a predefined wavelength require to render visible said first graphical constellation of marks because the person does not have to present its own finger, so fingerprint information can be extracted directly from the card and no image analysis is require to extract fingerprint features, which saves time.

With regards to claim 40, Eshera and Berson disclose all the limitations in claim 38, but do not disclose detecting first graphical constellation of marks. Greenaway discloses detecting said first graphical constellation of marks from additional visual information applied to said predefined area, said first graphical constellation of marks being unobtrusive within said additional visual information to an unaided human eye (see figure 3, there is no obstruction between the card and light; also see figure 4b shows the constellation of the features). One skilled in the art would include detecting said first graphical constellation of marks because to extract fingerprint information directly from card without having the person place its finger on the sensor and perform image analysis on the fingerprint image, to save time.

With regards to claim 5, see the rationale and rejection for claims 4 and 40.

With regards to claim 6, see the rationale and rejection for claim 39. In addition, the features inside hologram in Greenaway are not visible.

With regards to claim 12, see the rationale and rejection for claims 11 and 40.

With regards to claims 13 and 14, see the rationale and rejection for claim 40. In addition, the card in Berson includes delimiting marks, shown in fig 1 – 18D and 20D, to separately detect the different sub fields within the card; the light-emitting diodes belong to a range of wavelengths (not just one wavelength value) of visible light on the light spectrum.

With regards to claims 21 – 23, see the rationale and rejection for claims 39 and 40.

With regards to claim 27, see the rationale and rejection for claim 5.

With regards to claim 29, see the rationale and rejection for claim 40.

With regards to claim 34, see the rationale and rejection for claim 13.

Art Unit: 2624

4. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Eshera ('014) in view of official notice and Berson ('506) as applied to claim 1 further in view of Tuceryan (US pat no 6,044,168).

With regards to claim 47, Eshera and Berson disclose all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose marks is applied to said article by three dimensional marking means. Tuceryan discloses an article of manufacture according to claim 1 wherein said group of marks is applied to image by three-dimensional making means (see col. 4 lines 62 – 65 and fig 7). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include marks is applied to said means by three dimensional marking means because to obtain the shape of the biometric data, so more details are use to help the authentication process.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2624

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Liew whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alex Liew

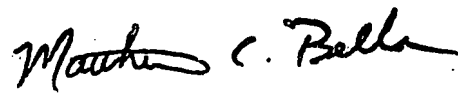
Application/Control Number: 10/602,040

Page 15

Art Unit: 2624

AU2624

9/12/07

A handwritten signature in black ink, reading "Matthew C. Bella". The signature is written in a cursive style with a large, stylized "M" and "B".

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600